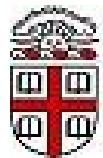# The 2005 Medicaid Elderly Population in Nursing Homes vs. Community-based Waivers:

Differences in Cognition, Mood, Behavior and Physical Functioning

Prepared for the RI Medicaid Program's
Real Choice System Transformation Project

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Summary of Findings

This comparison of RI nursing home residents covered by Medicaid in 2005 and Medicaid waiver participants who used home care services in 2005 using data derived from assessment measures of cognition, mood, behavior and physical functioning that were virtually the same and that revealed the following similarities and differences:

- A higher proportion of Medicaid nursing home resident assessments than waiver participant assessments were rated to have "OK" short term memory. The perceptions of raters in nursing homes may be based on different expectations from the perceptions of raters in home health settings.

- While about 60% of home care assessments indicated "independent" or "modified independent" ability to make daily decisions, nursing home resident assessments were much more likely to indicate "moderate impairment" in cognition (41% vs. 19% of home care assessments). Interestingly, approximately the same proportion of home care and nursing home assessments (19% and 18%, respectively) indicated "severe" cognitive impairment.

- The biggest surprise in this study is the substantial differences in ratings on nursing home resident assessments versus waiver home care assessments in indicators of mood state, with home care users rated as exhibiting substantially higher levels of depression, anxiety, anger etc. Again, this may be attributable to differences in raters' expectations in nursing home versus home health settings.

- Nursing home assessments generally indicate higher levels of problem behaviors among residents than do waiver home care assessments, although the difference between the groups is modest, with one exception: while only 5% of home care assessments report aggressive resistance to care, resistance is reported in nearly 20% of nursing home assessments. However, nursing home residents are more likely to be rated "behavior occurred, not easily altered" while home care clients are more likely to be rated "behavior occurred, easily altered." Problem behaviors manifesting in home health clients may be associated with recent hospitalizations or acute illnesses.

- As expected, a higher proportion of home care assessments rate waiver participants as "independent in activities of daily living" than is the case for nursing home resident assessments. However, the groups are quite close in regard to independence in bathing and eating.

- In contrast, the proportion of assessments rated as requiring excessive assistance with or totally dependent in the performance of an ADL is much higher among nursing home residents than waiver participants receiving home care. The magnitude of the difference is quite consistent across ADLs.

- In summary, although people on Medicaid participating in waiver programs are required to have need for assistance with at least one ADL, the levels of need for assistance are higher among people in nursing homes than among people in waiver home care, as one would expect. However, some of the differences, particularly in mood state indicate much more of a problem among waiver participants who use home care than residents in nursing homes, which is quite contrary to expectations.

Implications

- Some of the "surprises" in the comparisons between assessment of nursing home residents and waiver participants warrant discussions with raters in both settings to understand whether these differences are "real" or whether they capture different expectations among raters for the mood state and short term memory of elderly people in institutional versus community-based care. Training of raters across settings will be important to data comparisons.

- There is much to be learned from assessment data for people in both community and institutional long term care settings. The systematic implementation of assessments containing common measures on resident health and functioning across community-based programs and institutional settings will enable tracking of changes in case mix and can highlight problem areas for program development, as state efforts to provide alternatives to nursing home placement continues and this information is more broadly disseminated to the RI population.

Introduction

A major objective of the Rhode Island Medicaid "Real Choice System Transformation Project" is to educate providers, consumers and their families about the broad range of options that exist to provide long term support to persons who are not able to perform daily living activities without personal or technological assistance. It is hoped that broader dissemination of information will help to better balance long term care between commlunity-based and institutional options.

To accomplish this "system transformation", it is essential to understand the characteristics of elderly people who currently reside in institutional vs. community-based waiver programs. In this report, we compare data from assessments of nursing home residents covered by Medicaid in 2005 with comparable assessments of Medicaid waiver participants who used home care services in 2005. Comparable assessment data are available for indicators of Cognition, Mood, Behaviors and Physical Functioning.

 Key details of the data sources and definitions used in this research are as follows (more information is included in the Appendix to this report):

- The analysis of **RI Medicaid waiver participants who received home care** (HC) services in 2005 was based on data from an abbreviated version of the Minimum Data Set Home Care (MDS-HC) assessment. Home health agencies who serve Medicaid elderly are provided an incentive to complete an assessment to document the status of the client at each visit.
- The data set includes 5,138 assessments of 2,373 Medicaid waiver participants. Thus, each waiver participant beneficiary is represented by an average of 2.2 home care assessments in this database, although the actual number of assessments per waiver participant varies.
- The analysis of the **Medicaid nursing home (NH) population in RI** was based on the Minimum Data Set (MDS-NH) assessments for 2005.
- The data presented in this report is based on 14,560 assessments of 5,831 nursing home residents (average of 2.5 assessments per nursing home resident) that either indicated Medicaid as a source of payment or occurred in 2005 subsequent to an assessment that indicated Medicaid as the payment source (note that payment source is included on admission and annual assessments but not quarterly assessments).   This assumes that once a resident is Medicaid eligible in 2005, they remain eligible for the remainder of 2005.
- **It is important to remember that the unit of analysis in this report is the assessment rather than the individual person.**

Analytic Samples

The following graphs are based on samples of:

o **Medicaid Waiver participants who received home care**

5138 assessments of 2373 participants

o **Nursing Home residents on Medicaid**

14,560 assessments of 5831 nursing home residents

o **Assessment (not resident) is the unit of analysis**

Cognition

Figure 1. Short Term Memory OK?
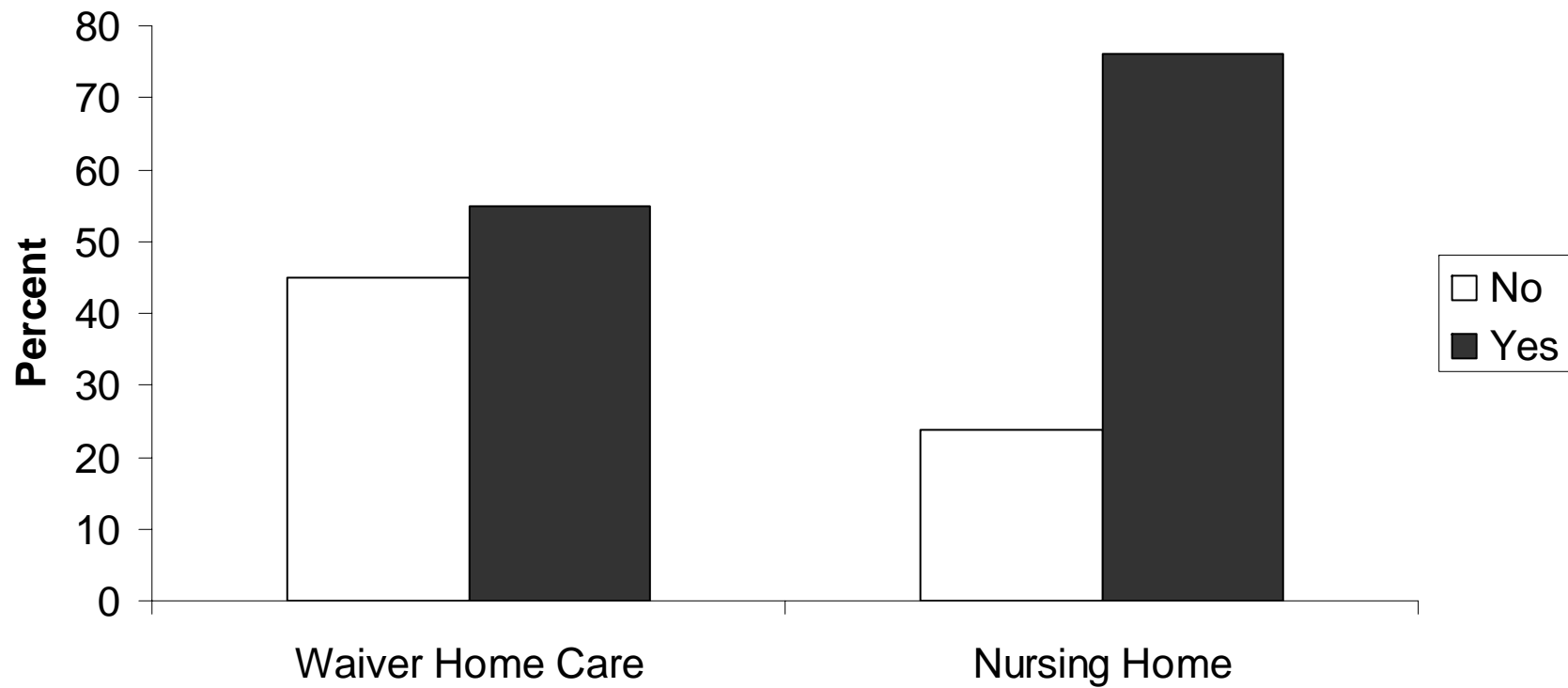
Figure 2. Cognitive Skills for Daily Decisions
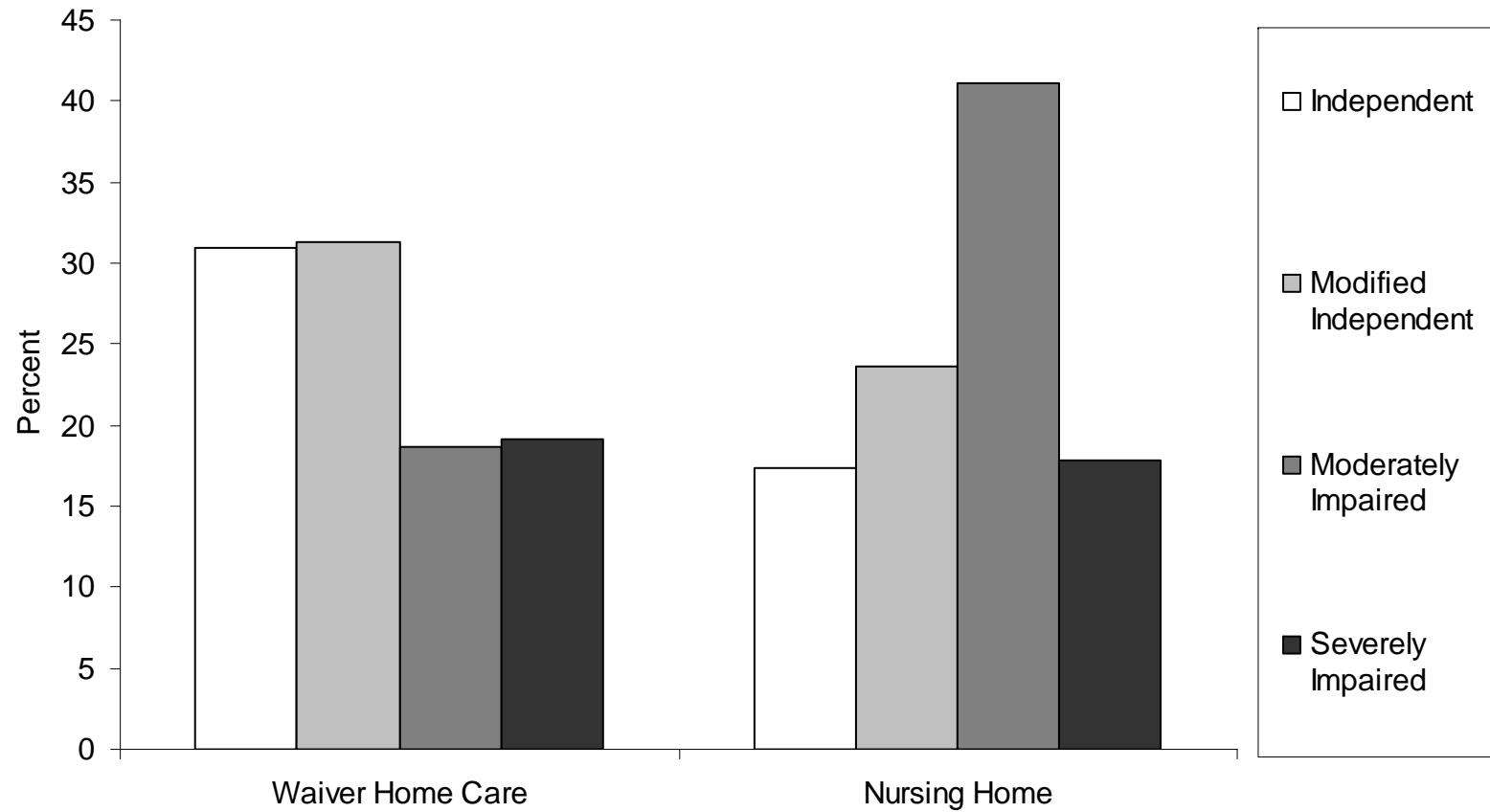
Mood

Figure 3. Indicators of Mood
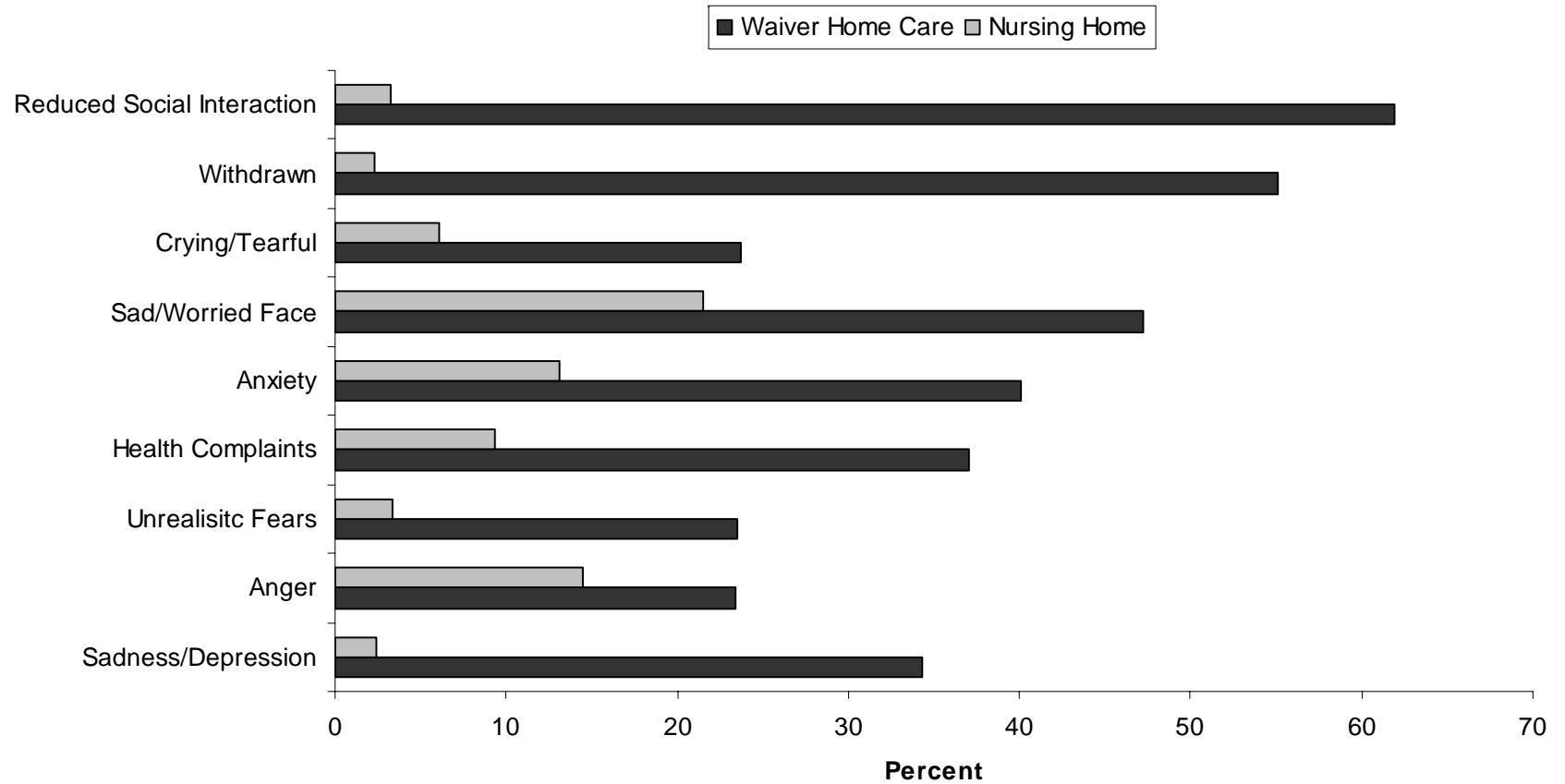
Behavior

Figure 4. Behavior Symptoms

- Occurred, easily altered
- Occurred, not easily altered*

WHC=Waiver home care;   NH=Nursing Home
*Occurrence within 7 days
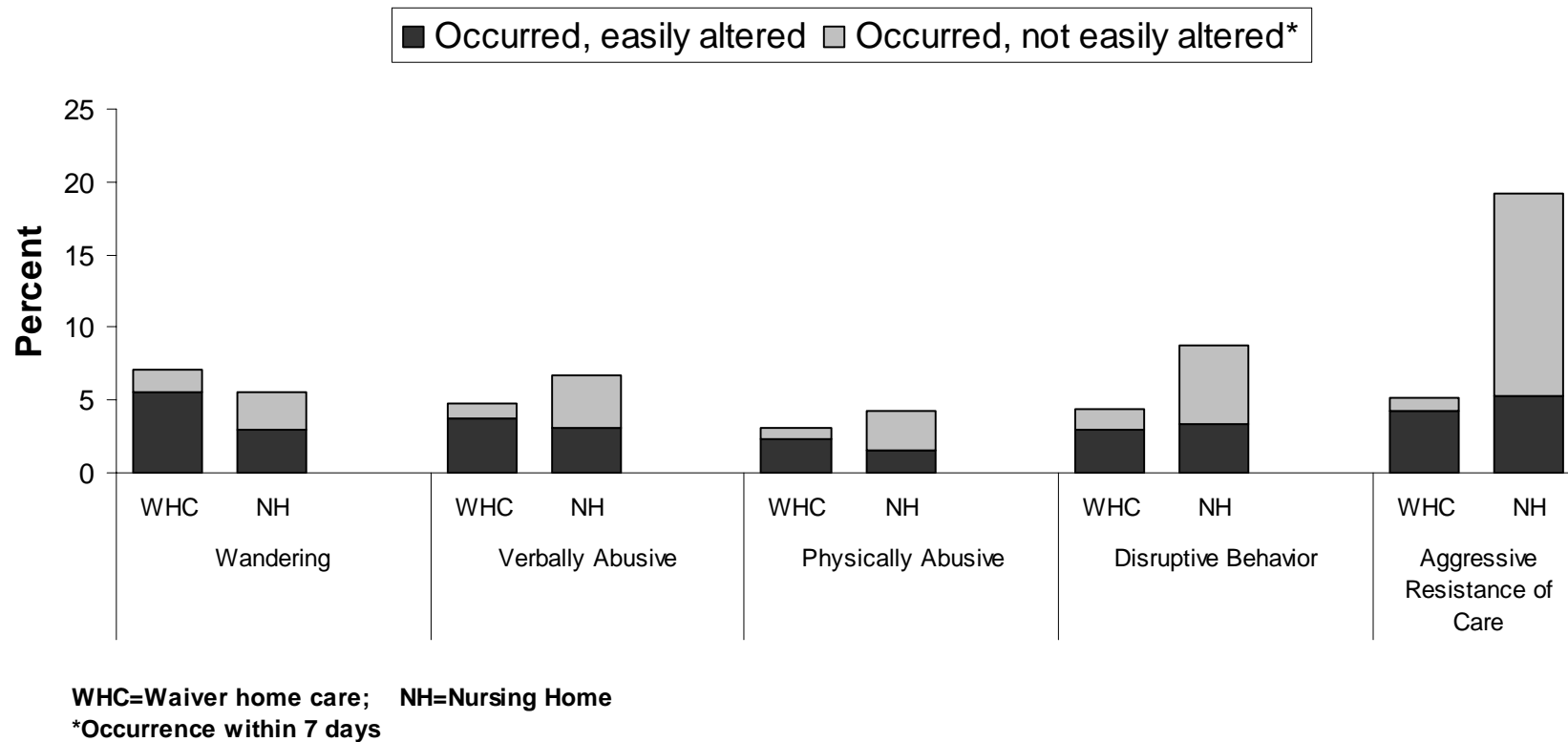
Figure 5. Behavior Worse in Last 30 Days

Physical Functioning

Figure 6. Independent in Physical Functioning

Bar chart legend: ■ Waiver Home Care □ Nursing Home

Categories (top to bottom): Bathing, Personal Hygiene, Toileting, Eating, Dressing, Locomotion in Home, Transfer, Mobility in Bed

X-axis: Percent (0 to 70)
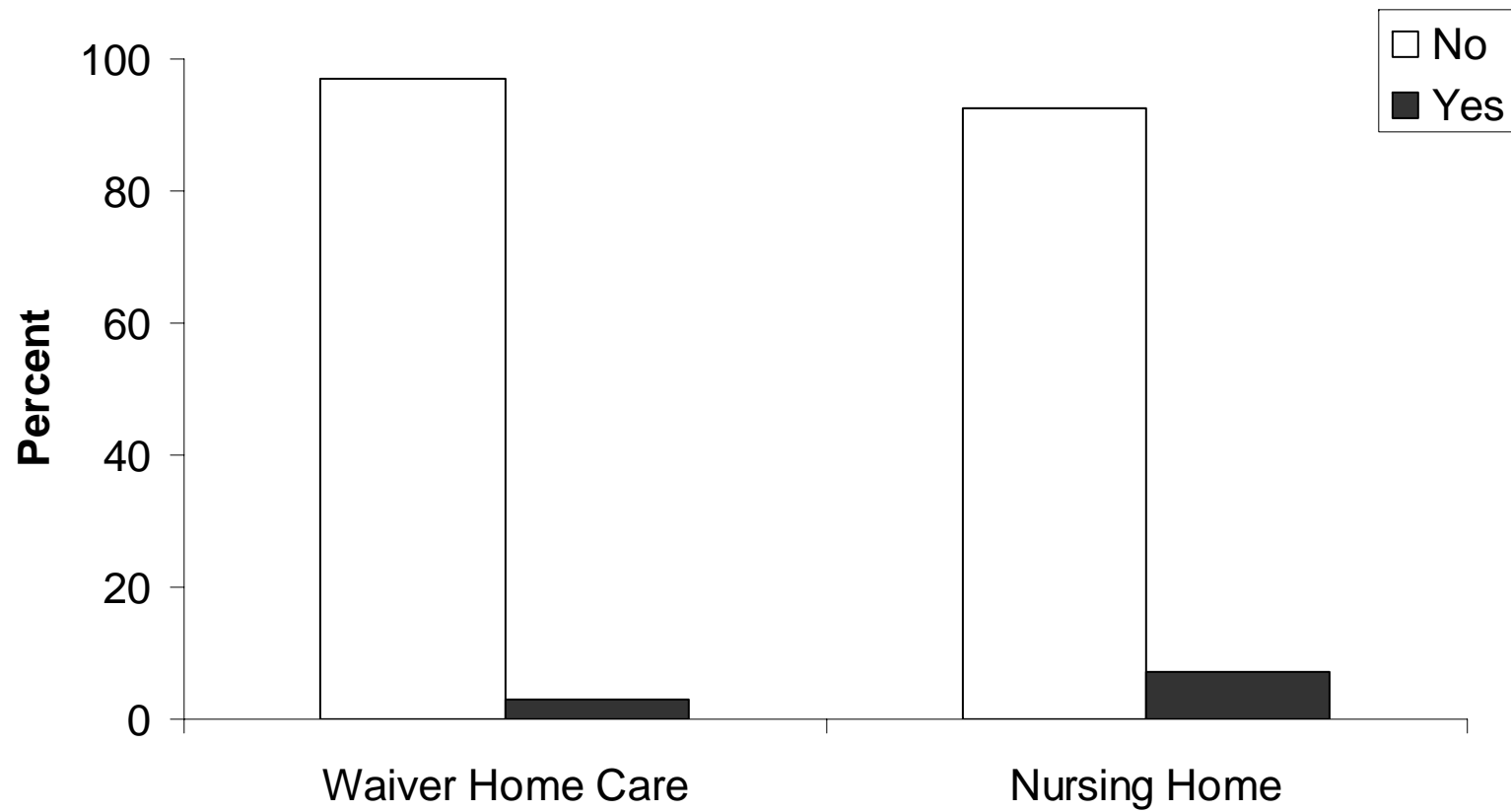
Figure 7. Requires Excessive Assitance With or is Totally Dependent in Physical Functioning

APPENDIX A

Description of Data Sources and

Corresponding Tables for Figures Presented in Report

DATA SOURCES

RI MDS-HC for 2005

The analysis of the RI Medicaid waiver participants receiving home care (HC) was based on an abbreviated version of the Minimum Data Set Home Care (MDS-HC) assessments for 2005. Home health agencies who serve Medicaid elderly are provided an incentive to complete an assessment to document the status of the client at each visit.

The dataset consisted of N=5,138 MDS-HC assessments from n=2,373 Medicaid beneficiaries. The great majority (92%) of beneficiaries had at most three assessments during 2005 (32% had 1, 31% had 2, and 29% had 3). Only 1% of beneficiaries had six or more assessments. *A limitation is that we were not able to determine whether the number of assessments indicated time in program since waiver participants may not have been consistently assessed using this instrument.*
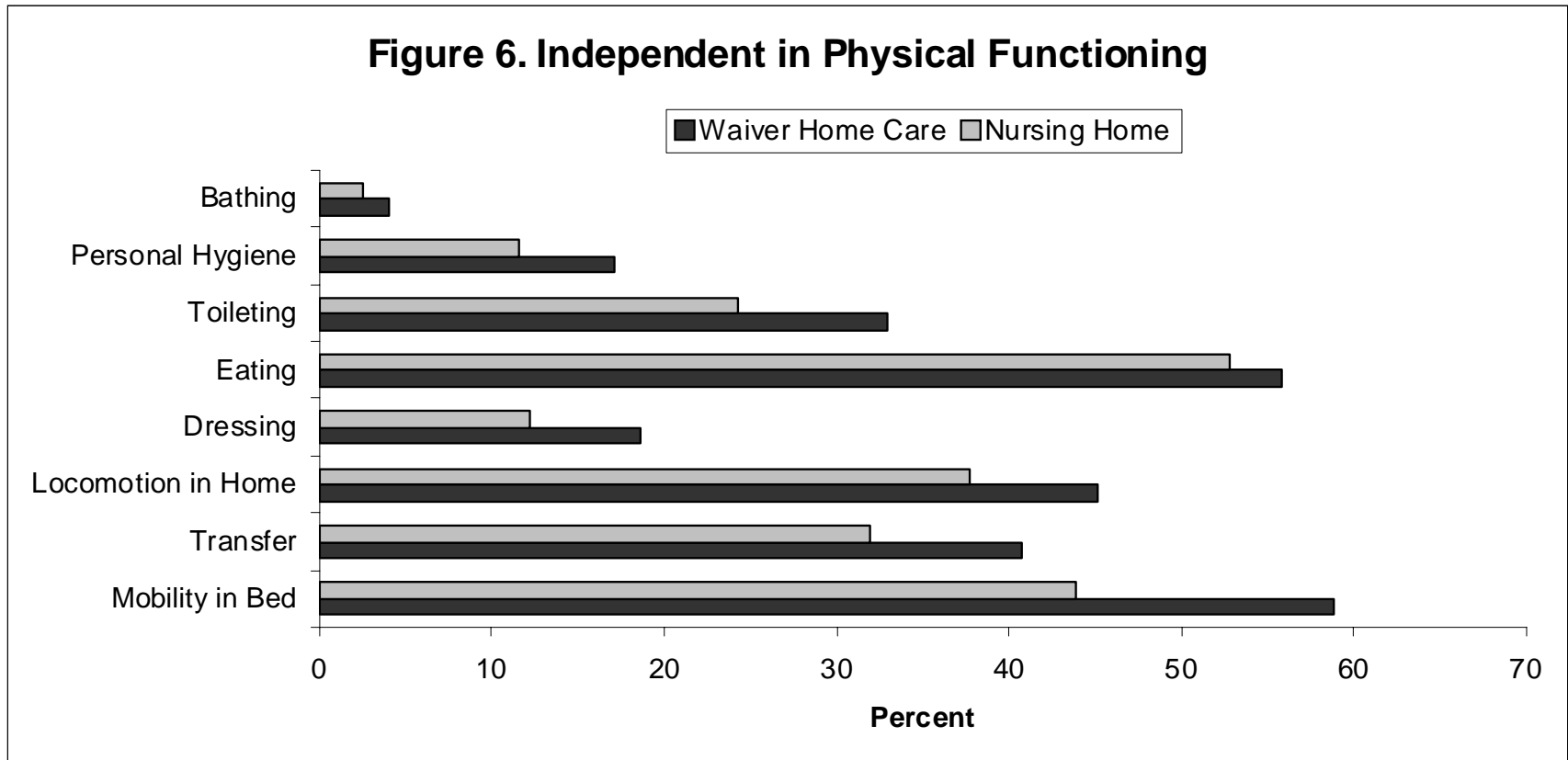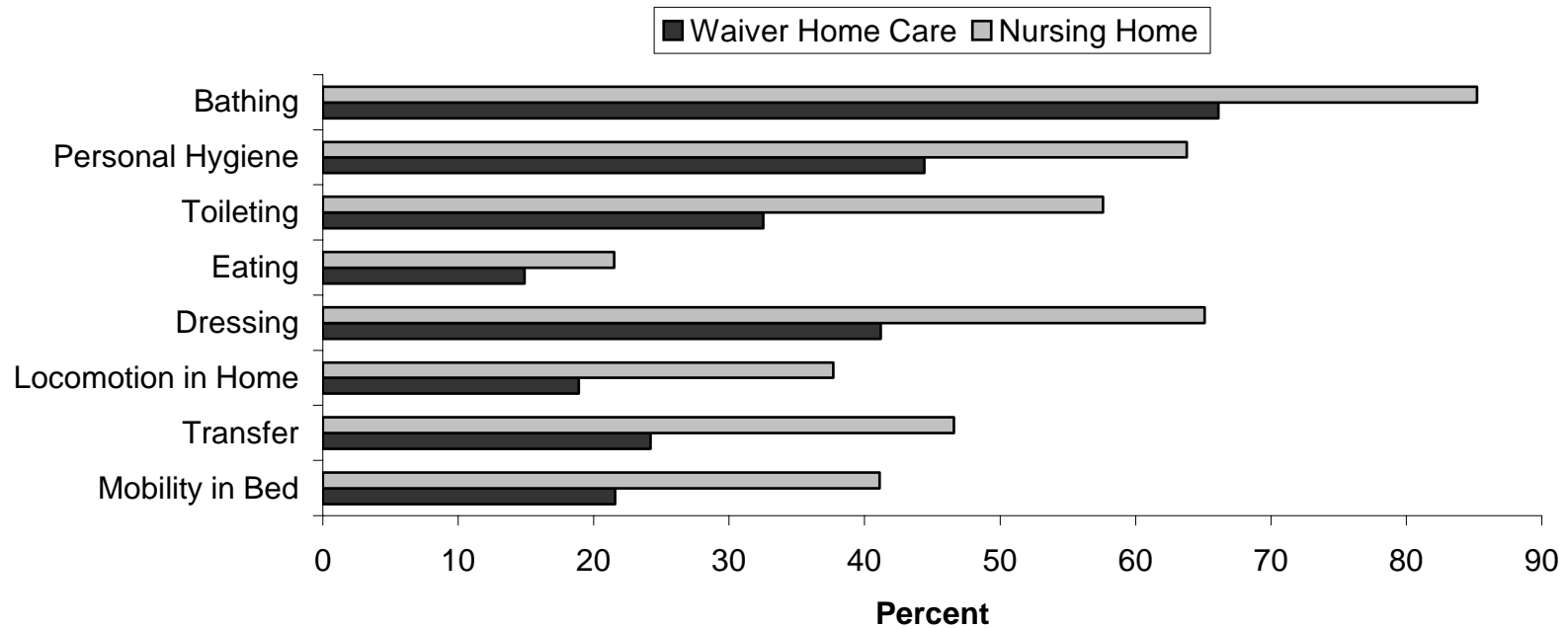
RI MDS-NH for 2005 for Medicaid NH Population

The analysis of the Medicaid nursing home (NH) population in RI was based on the Minimum Data Set (MDS) assessments for 2005. The initial RI 2005 MDS-NH dataset consisted of N=80,477 assessments from n=19,607 NH residents. After discarding readmission and discharge assessments (N=25,446) which contain no cognitive, mood, behavior nor ADL data, we obtained N=55,031 assessments corresponding to n=17,189 NH residents.

Of these residents, 5,831 had Medicaid as a payment source for all or some part of 2005, while 8,774 had other sources of payment, and for 2,584 there was not enough information on the data to determine whether Medicaid was a source of payment (this is due to payment source information being collected only in admission, annual and 'significant change in status' assessments; meaning these residents only had quarterly, readmission and/or discharge assessments in 2005 with no payment source information in them).

Of the N= 23,756 assessments corresponding to the n=5,831 NH residents that received Medicaid at some point in 2005, N=14,560 (61.3%) had either Medicaid as a source of payment indicated on the assessment or no source of payment information was indicated (e.g. quarterly assessments) but the assessment occurred immediately after their first Medicaid eligibility assessment and thus they are considered Medicaid eligible. The following analysis is based on these N=14,560 assessments under the assumption that once a nursing home resident is Medicaid eligible in 2005, they remain eligible for the remainder of 2005.

The 14,560 assessments comprising our sample are a mix of assessment types that include cognitive mood, behavior and ADL measures, i.e., admission assessments, annual assessments, quarterly assessments, and assessments conducted upon a significant change in resident status.

TABLES CORRESPONDING TO FIGURES

COGNITION (Figures 1 and 2)
==========
Number (and %) of assessments

MDS-HC

	0	1	2	3
Short Term Memory OK?	2,320 (45.0%)	2,812 (55.0%)		
Cognitive Skills for Daily Decisions	1,587 (30.9%)	1,606 (31.3%)	959 (18.7%)	980 (19.1%)

- Short Term Memory OK?: 0=No, 1=Yes.
- Cognitive Skills: 0=Independent, 1=Modified Independence, 2=Moderately Impaired, 3=Severely Impaired.

MDS-NH

	0	1	2	3
Short Term Memory OK?	3,462 (23.8%)	11,082 (76.1%)		
Cognitive Skills for Daily Decisions	2,533 (17.4%)	3,436 (23.6%)	5,982 (41.1%)	2,594 (17.8%)

- Short Term Memory OK?: 0=No, 1=Yes.
- Cognitive Skills: 0=Independent, 1=Modified Independence, 2=Moderately Impaired, 3=Severely Impaired.

MOOD (Figure 3)
=====

Number (and %) of assessments:

MDS-HC

	0	1	2
Sadness/Depression	3,373 (65.7%)	1,070 (20.8%)	685 (13.3%)
Anger	3,933 (76.6%)	752 (14.6%)	443 (8.6%)
Unrealistic Fears	3,931 (76.5%)	712 (13.9%)	481 (9.4%)
Health Complaints	3,237 (63.0%)	1,044 (20.3%)	838 (16.3%)
Anxiety	3,077 (59.9%)	1,214 (23.6%)	837 (16.3%)
Sad/Worried Face	2,712 (52.8%)	1,569 (30.5%)	844 (16.4%)
Crying/Tearful	3,919 (76.3%)	712 (13.9%)	497 (9.7%)
Withdrawn	2,307 (44.9%)	1,151 (22.4%)	1,667 (32.4%)
Reduced Social Interaction	1,955 (38.1%)	1,414 (27.5%)	1,751 (34.1%)

* All Mood Pattern Variables during the last 30 days: 0=Not in last 30 days, 1=up to 5/week, 2=daily(6 or 7 times per week).

MDS-NH

	0	1	2
Sadness/Depression	14,212 (97.6%)	306 (2.1%)	34 (0.2%)
Anger	12,450 (85.5%)	1,809 (12.4%)	293 (2.0%)
Unrealistic Fears	14,066 (96.6%)	438 (3.0%)	49 (0.3%)
Health Complaints	13,212 (90.7%)	1,061 (7.3%)	280 (1.9%)
Anxiety	12,660 (86.9%)	1,507 (10.4%)	386 (2.7%)
Sad/Worried Face	11,433 (78.5%)	2,506 (17.2%)	614 (4.2%)
Crying/Tearful	13,672 (93.9%)	800 (5.5%)	81 (0.6%)
Withdrawn	14,231 (97.7%)	228 (1.6%)	94 (0.7%)
Reduced Social Interaction	14,077 (96.7%)	350 (2.4%)	126 (0.9%)

* All Mood Pattern Variables during the last 30 days: 0=Not in last 30 days, 1=up to 5/week, 2=daily(6 or 7 times per week).

Note: Variable form displayed in Figure 3: No=Not in last 30 days (value 0), Yes=any (values 1 and 2 combined)

BEHAVIOR (Figures 4 and 5)
=========
Number (and %) of assessments

MDS-HC

	0	1	2
Behavioral Symptoms:			
Wandering	4,770 (92.8%)	280 (5.5%)	82 (1.6%)
Verbally Abusive	4,882 (95.0%)	197 (3.8%)	53 (1.0%)
Physically Abusive	4,971 (96.8%)	119 (2.3%)	42 (0.8%)
Disruptive Behavior	4,904 (95.5%)	151 (2.9%)	77 (1.5%)
Aggressive Resistance of Care	4,866 (94.7%)	213 (4.2%)	53 (1.0%)
Changes in Behavior:			
Behavior worse over last 30 Days	4,980 (96.9%)	151 (2.9%)	

- All Behavior Pattern Variables during the last 7 days: 0=Not in last 7 days, 1=Occurred, easily altered, 2= Occurred, not easily altered.
- Behavior worse over last 30 days: 0=No, 1=Yes

MDS-NH

	0	1	2
Behavioral Symptoms:			
Wandering	13,747 (94.4%)	438 (3.0%)	368 (2.5%)
Verbally Abusive	13,574 (92.2%)	456 (3.1%)	523 (3.6%)
Physically Abusive	13,925 (95.6%)	229 (1.6%)	399 (2.7%)
Disruptive Behavior	13,279 (91.2%)	500 (3.4%)	774 (5.3%)
Aggressive Resistance of Care	11,758 (80.8%)	776 (5.3%)	2,019 (13.9%)
Changes in Behavior:			
Behavior worse over last 30 Days	6,238 (42.8%)	487 (3.3%)	

- All Behavior Pattern Variables during the last 7 days: 0=Not in last 7 days, 1=Occurred, easily altered, 2= Occurred, not easily altered.
- Behavior worse over last 30 days: 0=No, 1=Yes
- Changes in Behavior information is only available for the N=6,732 Admission, Annual and Significant Change assessments; percentages calculated with this N as the denominator.

PHYSICAL FUNCTIONING (Figures 6 and 7)

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Number (and %) of assessments

MDS-HC

	0	1	2	3	4	5
Activities of Daily Living:						
Mobility in Bed	3,025 (58.9%)	665 (12.9%)	569 (11.1%)	404 (12.9%)	449 (8.7%)	7 (0.1%)
Transfer	2,091 (40.7%)	923 (18.0%)	826 (16.1%)	554 (10.8%)	686 (13.4%)	36 (0.7%)
Locomotion in Home	2,319 (45.1%)	899 (17.5%)	805 (15.7%)	464 (9.0%)	510 (9.9%)	116 (2.3%)
Dressing	955 (18.6%)	660 (12.9%)	1,371 (26.7%)	1,112 (21.6%)	1,009 (19.6%)	10 (0.2%)
Eating	2,867 (55.8%)	850 (16.5%)	627 (12.2%)	324 (6.3%)	441 (8.6%)	6 (0.1%)
Toileting	1,688 (32.9%)	751 (14.6%)	1,001 (19.5%)	743 (14.5%)	926 (18.0%)	7 (0.1%)
Personal Hygiene	880 (17.1%)	575 (11.2%)	1,376 (26.8%)	1,157 (22.5%)	1,125 (21.9%)	3 (0.1%)
Bathing	205 (4.0%)	235 (4.6%)	1,261 (24.5%)	1,7774 (34.5%)	1,624 (31.6%)	9 (0.2%)

- All Activities of Daily Living and Bathing during the last 7 days: 0=Independent, 1=Supervision, 2= Limited Assistance, 3= Extensive Assistance, 4= Total Dependence, 5=Activity did not occur over the entire seven days.

MDS-NH

	0	1	2	3	4	5
Activities of Daily Living:						
Mobility in Bed	6,388 (43.9%)	543 (3.7%)	1,632 (11.2%)	3,653 (25.1%)	2,336 (16.0%)	8 (0.1%)
Transfer	4,663 (32.0%)	866 (6.0%)	2,159 (14.8%)	3,746 (25.7%)	3,042 (20.9%)	84 (0.6%)
Locomotion in Home	5,492 (37.7%)	1,764 (12.1%)	1,498 (10.3%)	1,330 (9.1%)	4,157 (28.6%)	318 (2.2%)
Dressing	1,780 (12.2%)	1,020 (7.0%)	2,253 (15.5%)	5,501 (37.8%)	3,972 (27.3%)	34 (0.2%)
Eating	7,686 (52.8%)	2,837 (19.5%)	900 (6.2%)	1,004 (6.9%)	2,117 (14.6%)	16 (0.1%)
Toileting	3,537 (24.3%)	716 (4.9%)	1,760 (12.1%)	3,930 (27.0%)	4,457 (30.6%)	160 (1.1%)
Personal Hygiene	1,694 (11.6%)	1,314 (9.0%)	2,265 (15.6%)	4,711 (32.4%)	4,576 (31.4%)	0 (0.0%)
Bathing	366 (2.5%)	992 (6.8%)	795 (5.5%)	7,054 (48.5%)	5,338 (36.7%)	15 (0.1%)

Note: Variable form for Figure 6: Bars represent % who are independent (value 0);
Figure 7: Bars represent percent with extensive assistance or total dependence (values 3 and 4 combined).

APPENDIX B

Comparison of Question Wording Between
MDS-Nursing Home and Modified MDS-Home Care

MDS-NC	MDS-HC
Figure 1. Short term Memory OK?	
Short Term Memory OK--seems/appears to recall after 5 minutes	Identical
Figure 2 Cognitive Skills for Daily Decisions	
Made decisions regarding tasks of daily life	How well client made decisions about organizing the day (e.g. when to get up or have meals, which cloths to wear)
Figure 3. Indicators of Mood	
Reduced Social Interaction	Identical
Withdrawn Withdrawal from activities of interest, e.g. no interest in long standing activities or being with family/friends	Withdrawal from activities of interest
Crying tearful Crying, tearfulness	Recurrent crying/tearfulness
Sad /Worried Face Sad, pained worried facial expressions-e.g. furrowed brow	Identical
Anxiety Repetitive anxious complaints/concerns (non health related) e.g.-persistently seeks attention/reassurance regarding schedules, meals, laundry, clothing, relationship issues.	Repetitive anxious complaints/concerns (non health related) e.g.-persistently seeks attention/reassurance regarding schedules, meals, relationships.
Health Complaints Repetitive health complaints-e.g persistently seeks medical attention, obsessive concern with body functions	Repetitive health complaints-e.g obsessive concern with body functions, health.

Unrealistic Fears Expressions of what appears to be unrealistic fears e.g fears of being abandoned , left alone, being with others	Expressions of what appears to be unrealistic fears (of being abandoned etc).
Anger Persistent anger with self or others-e.g easily annoyed, anger at placement in nursing home, anger at care received.	Persistent anger with self or others-e.g easily annoyed, anger at care received.
Sadness/Depression Resident made negative statements e.g *"Nothing matters; Would be better of dead, What's the use; Regrets having lived so long; Let me die"*	A feeling of sadness or being depressed, that life is not worth living, that nothing matters, that he/she is of no use to anyone or would rather be dead.
Figure 4. Behavior Symptoms	
Wandering Wandering (moved with no rational purpose, seemingly oblivious to needs or safety).	Wandering (moved with no rational purpose)
Verbally abusive Verbally abusive behavioral symptoms (others were threatened , screamed at cursed at)	Verbally abusive behavior(threatened or cursed at others)
Physically Abusive Physically Abusive Behavioral Symptoms (others were hit, shoved, scratched, sexually abused)	Physically Abusive Behavior (to self or others)
Disruptive Behavior Socially Inappropriate/disruptive symptoms (made disruptive sounds, noises, screaming, self abusive acts, sexual behavior or disrobing in public, smeared/ threw food feces, hoarding, rummaged through others belongings)	Socially Inappropriate/disruptive Behavior (smears, throws body feces, screams, disrobing in public)

Aggressive Resistance of Care Resists Care (resisted taking medications/injections, ADL assistance, or eating)	Aggressive Resistance of Care (Threw meds, pushed caregiver, etc)
Figure 5. Behavior Worse in last 30 Days	
Change in behavioral symptoms: Residents behavior status has changed as compared to status of 90 days ago (or since last assessment if less than 90 days)	Changes in Behavior: behavioral symptoms have become worse over past 30 days.
Figures 6&7 Physical Functioning	
Bathing How resident takes full body bath/shower, sponge bath, and transfers in/out of tub shower (EXCLUDE washing of back and hair)	Include shower sponge bath, tub bath
Personal Hygiene: How resident maintains personal hygiene, including combing hair, brushing teeth, shaving, applying makeup, washing/drying face, hands and perineum (EXCLUDE bath and showers).	Combing hair, brushing teeth, washing face and hands, shaving.
Toilet Use How residents uses the toilet room (or commode, bedpan, urinal) transfer on/off toilet, cleanses, changes pad, manages ostomy or catheter, adjusts clothes.	Include using toilet, commode, bedpan, urinal, catheter, transfers, cleaning self and managing clothing
Eating How residents eats and rinks (regardless of skill). Includes intake of nourishment by other means (e.g tube feeding, total parenteral nutrition)	Include taking in food by any method including tube feeding.

Dressing How resident puts on , fastens and takes off all items of street clothing, including donning/removing prosthesis	Includes laying out cloths, retrieving from closet, outing on and taking off.
Walk in Room How resident walks between locations in his/her room	Locomotion in Home in wheelchair, self sufficiency once in chair.
Transfer How residents moves between surfaces- to/from: bed, chair wheelchair, standing position (Exclude to/from bath/toilet)	Transfer to and between surfaces-bed, chair, standing position (exclude bathroom transfers).
Bed Mobility How resident moves to and from lying position, turns side to side and positions body while in bed.	Mobility in Bed: moving to and from lying position, turning and positioning body in bed.